

Claims

What is claimed is:

1. A system to facilitate installation and/or removal of components including at least one shared component, comprising:
 - a validation engine operative to provide a valid order; and
 - an installer operative to control at least one of an install and removal operation of the components based on the valid order and operative to effect manipulation of at least one property associated with the at least one shared component to reflect dependency for the at least one shared component according to the installation or removal thereof.
2. The system of claim 1, wherein the valid order identifies shared components for installation subsequent to non-shared components.
3. The system of claim 2, wherein the installer is operative to initiate a method to install each of the components based on the valid order during a part of the installation, the at least one shared component being installed and configured for a selected dependent component during the first part of installation.
4. The system of claim 3, wherein the method is operative to employ a second part of the installation to install the at least one shared component for each dependent component other than the selected dependent component during the second part of the installation.
5. The system of claim 1, wherein the at least one property further comprises a reference count having a value indicative of a number of dependent components associated with the at least one shared component.
6. The system of claim 5, wherein the installer is operative to effect an increase in the value of the reference count for each installation of the at least one shared component.

7. The system of claim 5, wherein the installer is operative to effect a decrease in the value of the reference count in response to removal of a dependent component that depends on the at least one shared component.

8. The system of claim 1, wherein the at least one property further comprises configuration data indicative of an operating relationship of the at least one shared component and each installed dependent component associated with the at least one shared component component.

9. The system of claim 1, wherein the installer is operative to control installation of the at least one shared component, such that a single set of files for the at least one shared component are copied as part of the installation for use by associated dependent components.

10. The system of claim 9, wherein the at least one shared component has associated metadata operable to identify the at least one shared component as a shared component.

11. The system of claim 10, wherein the at least one shared component requires at least one dependent component to perform a substantially useful function.

12. The system of claim 11, wherein a runtime dependency exists between an installed dependent component and the shared component on which the dependent component depends.

13. A system to facilitate installation of components including at least one shared component, comprising:

a setup manager which controls installation of the components;

dependency manager which provides a valid installation order based on metadata associated with at least some of the components;

wherein the setup manager causes the components to be installed according to the valid installation order, a separate shared installation of the at least one shared component being implemented for each dependent component that depends on the at least one shared component.

14. The system of claim 13, wherein the dependency manager is operative to validate a received installation order, which, upon validation of the received installation order, becomes the valid installation order.

15. The system of claim 14, wherein, if the received installation order is improper, the dependency manager is operative to create the valid installation order.

16. The system of claim 13, wherein metadata associated with the at least one shared component identifies the at least one shared component as a shared component.

17. The system of claim 13, wherein the setup manager is operative to initiate a method to install each of the components according to the valid installation order during a first part of the installation, the at least one shared component being installed for a first dependent component during the first part of installation, the method being operative to install the at least one shared component for each other dependent component during a second part of the installation.

18. The system of claim 13, further comprising at least one property associated with an installed instance of the at least one shared component which reflects dependency for the at least one shared component.

19. The system of claim 18, wherein the at least one property further comprises a reference count having a value indicative of a number of dependent components associated with the at least one shared component.

20. The system of claim 19, wherein the setup manager is operative to control the value of the reference count as a function of each installation and removal of the at least one shared component.

21. The system of claim 13, wherein the at least one property further comprises configuration data indicative of an operating relationship of the at least one shared component and each dependent component associated with the shared component.

22. The system of claim 1, wherein the setup manager is operative to control installation of the at least one shared component based on the valid installation order, such that a single set of program files for the shared component is copied as part of the installation.

23. A system to facilitate installation and/or removal of components including at least one shared component, comprising:

a validation component operative to provide a valid order based on setup data;

and

a setup engine operative to initiate installation of each of the components according to the valid order during a first part of the installation, the shared component being installed for a first dependent component during the first part of installation, the shared component being installed for each other dependent component during a second part of the installation separate from the first part.

24. A system to facilitate installation and/or removal of components including at least one shared component, comprising:

a dependency manager operative to provide a valid order based on setup data;

and

a setup engine operative to initiate installation of each of the components according to the valid order during a first part of the installation, the shared component being installed for a first dependent component during the first part of installation, the shared component being installed for each other dependent component during a second part of the installation, which is subsequent to the first part;

wherein the setup manager is operative to effect manipulation of at least one property associated with the at least one shared component to reflect dependency characteristics of the at least one shared component as a function of at least one of installation of the shared component and removal of a dependent component that depends on the at least one shared component.

25. A system to facilitate installation and/or removal of components including at least one shared component, comprising:

means for providing a valid order for the components;

means for controlling installation of the components based on the valid order;

and

means for manipulating at least one property associated with the at least one shared component to reflect dependency for the at least one shared component based on at least one installation of the shared component and removal of a dependent component that depends on the at least one shared component.

26. A method to facilitate installing and/or removing components including at least one shared component, the method comprising:

providing a valid order;

installing each of the plurality of components based on the valid order; and

modifying at least one property associated with the at least one shared component to reflect dependency characteristics of the at least one shared component relative dependent components operative to use the at least one shared component.

27. The method of claim 26, wherein the at least one property further comprises a reference count having a value indicative of a number of dependent components that depend on the at least one shared component.

28. The method of claim 27, further comprising controlling the value of the reference count in response to each installation of the at least one shared component and removal of a dependent component that depends on the at least one shared component.

29. The method of claim 26, further comprising effecting installation of each of the components during a first part of installation according to the valid order, the shared component being installed for a first dependent component during the first part of the installation.

30. The method of claim 29, further comprising effecting installation of the shared component for each other dependent component that depends on the shared component during a second part of the installation, which is separate from the first part.

31. A method to facilitate installing and/or removing components including at least one shared component, the method comprising:

providing a valid order;

effecting installation of each of the components during a first part of installation according to the valid order, the shared component being installed for a first dependent component during the first part of the installation;

effecting installation of the shared component for each other dependent component during a second part of the installation separate from the first part.